

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH

Fiscal Year 2002 Hearings on Lifespan

Witness appearing before the
House Subcommittee on Labor-HHS-Education Appropriations

Dr. Patricia A. Grady, Director
National Institute of Nursing Research

April 4, 2001

Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss research of the National Institute of Nursing Research (NINR) across the human life span. NINR research addresses a broad array of life span issues – from low birthweight babies fighting for life, to children and adolescents with risk factors for disease, to the older people in our nation, who often have multiple disorders, and wish to extend the quality and quantity of their lives. This year, as NINR celebrates its 15th anniversary, it is encouraging to reflect on progress made so far.

HEALTHY BIRTHS – A GOOD START

Clearly, a normal birth is an important first step to a healthy lifestyle. Yet according to the National Center for Health Statistics, the United States is a disappointing 26th among industrialized nations in the number of babies per 1000 dying before their first birthday. The national rate is over 7 per thousand. For African-Americans, it is over 14 per thousand. Let me describe one of the ways nursing research addresses this issue. Researchers have influenced public and private organizations at the community level to address low birthweight and preterm births, and in so doing, have helped save lives, decrease health disparities, and decrease costs to the healthcare system. Nurse investigators targeted low-income African American pregnant women and Caucasian women at particular risk for low birthweight, including pregnant teens. This five-year project involved registered nurses making home visits and following up with low-cost, low-tech local phone calls. These nurses interacted with the women on a regular basis and dealt with their concerns. Results indicate that the low birthweight rate for these mothers was 10.9 percent, compared to 14.0 percent for controls. For African Americans 19 years and older, the results were even more pronounced – 11 percent versus 17 percent. Cost savings to the hospital were \$277 per pregnancy, not to mention the decrease in burden to families and long term cost to families and society of low birthweight infants. Investigators then expanded the

research to include Hispanics. Three programs focused on low-income women and one on women of all income levels nationwide. The results equaled or bettered the original study findings. All four programs are now being operated and funded by private sector organizations, including a national HMO.

HEALTH PROMOTION AT AN EARLY AGE

Moving along the life span, heart disease, still the number one cause of death in our nation, may have its roots early in life. Successful health promotion interventions must start early in childhood, when risk factors, such as high blood pressure, become evident. NINR-funded investigators have shown that risks for cardiovascular disease in a large population of elementary school children were reduced significantly in just eight weeks by a special school health program that emphasized health information and physical activities. Research testing similar interventions is now ongoing involving children through adolescence.

These same investigators also focused on a subset of school children aged 11 to 14 and found that seven percent had three of the leading risk factors for heart disease and type 2 diabetes – high insulin levels, high blood pressure, and either elevated triglycerides or low high density lipoprotein (HDL). They speculate that these children will probably develop type 2 diabetes within 10 years, with obesity predicting which children are at risk. They also indicate that a national epidemic of type 2 diabetes may follow the current epidemic of obesity in U.S. children as well. The Centers for Disease Control and Prevention reports that obesity continues to increase in the younger population, with 13 percent of children and 14 percent of adolescents being overweight. Research is currently underway with this high risk group.

PREVENTION AND SELF-MANAGEMENT OF ILLNESSES FOR TEENS AND ADULTS

Another emphasis of NINR is to prevent or manage illnesses that affect the life span, including helping people manage their own disease symptoms. Teens with diabetes have difficulty balancing diet and exercise to maintain proper blood sugar levels. Even when they know what to do, they do not always do it. Peer pressure is an important influence on behavior in this group. Investigators have developed an intervention that incorporates coping skills training into their intensive diabetes therapy program. Coping skills training includes role playing in difficult social situations. Findings indicate that teens receiving both intensive diabetes therapy and coping skills training had consistently lower glucose levels than those receiving therapy alone. Teens also became more confident in managing their disease in their daily lives.

Consideration of ethnicity is critical to encouraging positive change in minority populations. Among American Indians, for example, type 2 diabetes has reached epidemic proportions. Obesity, which has increased dramatically in the last 50 years in the American Indian population, is an important factor. NINR-funded research includes diabetes prevention and management strategies that incorporate the well known Indian tradition of storytelling or talking circles. Although Indian stories are entertaining, their primary purpose is to educate. Talking Circles are formed consisting of native storytellers and facilitators who provide wellness messages. Listeners are assisted in personal introspection that includes realization of the need for change in dietary and exercise habits and in lifestyles that include risky behaviors. A cookbook emphasizing Native American foods that meet the dietary health needs of this population is included in the program.

Another minority population that is hard to reach – young adult inner-city African-American men with high blood pressure – is at risk for stroke, heart failure and kidney failure. This group experiences many social and economic factors that can

impede regular medical care and healthy behavioral changes. A two-year study that provided blood pressure education, monitoring and follow-up for a group of 309 young African-American men demonstrated nearly a 40 percent improvement in blood pressure control. The overall national control rate is 27 percent. This difference underscores the importance of a healthcare team approach that improves access to information, care and medication. For many of the participants, it was the first time they were contacted by any healthcare organization and offered preventive services. The eighty-four percent retention rate in the study for the entire two years is noteworthy.

LONGEVITY AND QUALITY OF LIFE FOR SENIORS

The number of older people is increasing in our society, and healthcare professionals and family caregivers need workable strategies to help patients live healthy, independent lives for as long as possible. Researchers have tested a transitional care model on older people hospitalized with common medical and surgical problems. The model involves advanced practice nurses who conduct comprehensive hospital discharge planning, including determining the patient's care needs outside the hospital, with follow-up in the home. Findings indicate that the number of days in the hospital was reduced by 65 percent, and rehospitalizations and costs to the healthcare system were reduced by 48 percent for these patients. Investigators continue to test the model on patients with heart failure. These patients typically have a poor prognosis and the highest rate of hospitalization of all patient groups. It is also difficult for many of them to change risky behaviors, which underscores the importance of home follow-up.

Research is also directed at family caregivers, who are helping undergird the healthcare system. The demand for these caregivers is increasing. A survey by the Center for Advancement of Health found that one in four U.S. households provides some type of care for people with chronic conditions. Most caregivers are women and

many are elderly. Together with the National Institute on Aging, NINR supports the Resources for Enhancing Alzheimer's Caregiver Health (REACH) initiative consisting of six sites across the nation that address family caregiving for Alzheimer's disease patients, with special emphasis on minority populations. At one site, NINR-funded researchers are focusing on African-American and white caregivers and their relatives with Alzheimer's disease. An intervention is being tested to improve caregivers' ability to cope with daily stress and to manage the behavioral problems of the Alzheimer's patients. Even though such factors as psychological distress, physical health, and cultural and socioeconomic conditions may differ, the investigators' strategies are designed to be responsive to the common needs of both populations.

THE END OF THE LIFE SPAN

Let me conclude by addressing the end of the life span. NINR is the coordinator at the NIH for end of life and palliative care research, a relatively new scientific area. NINR is currently funding 22 studies and 7 training and career development awards. Ethnic and cultural differences at the end of life, identification of end-of-life symptoms for various diseases, and making decisions for advance directives are being investigated. NINR welcomes the opportunity to participate in this challenging research.

I would be pleased to answer any questions you may have.

DR. PATRICIA A. GRADY
DIRECTOR
NATIONAL INSTITUTE OF NURSING RESEARCH

Dr. Patricia A. Grady was appointed Director, NINR, on April 3, 1995. She earned her undergraduate degree in nursing from Georgetown University in Washington, DC. She pursued her graduate education at the University of Maryland, receiving a master's degree from the School of Nursing and a doctorate in physiology from the School of Medicine.

An internationally recognized stroke researcher, Dr. Grady's scientific focus has primarily been in stroke, with emphasis on arterial stenosis and cerebral ischemia. She was elected to the Institute of Medicine in 1999 and is a member of several scientific organizations, including the Society for Neuroscience, the American Academy of Nursing, and the American Neurological Association. She is also a fellow of the American Heart Association Stroke Council.

In 1988, Dr. Grady joined the NIH as an extramural research program administrator in the National Institute of Neurological Disorders and Stroke (NINDS) in the areas of stroke and brain imaging. Two years later, she served on the NIH Task Force for Medical Rehabilitation Research, which established the first long-range research agenda for the field of medical rehabilitation research. In 1992, she assumed the responsibilities of NINDS Assistant Director. From 1993 to 1995, she was Deputy Director and Acting Director of NINDS. Dr. Grady served as a charter member of the NIH Warren Grant Magnuson Clinical Center Board of Governors.

Before coming to NIH, Dr. Grady held several academic positions and served concurrently on the faculties of the University of Maryland School of Nursing and School of Medicine.

Dr. Grady has authored or co-authored numerous published articles and papers on hypertension, cerebrovascular permeability, vascular stress, and cerebral edema. She is an editorial board member of the major stroke journals. Dr. Grady lectures and speaks on a wide range of topics, including future directions in nursing research, developments in the neurological sciences, and federal research opportunities.

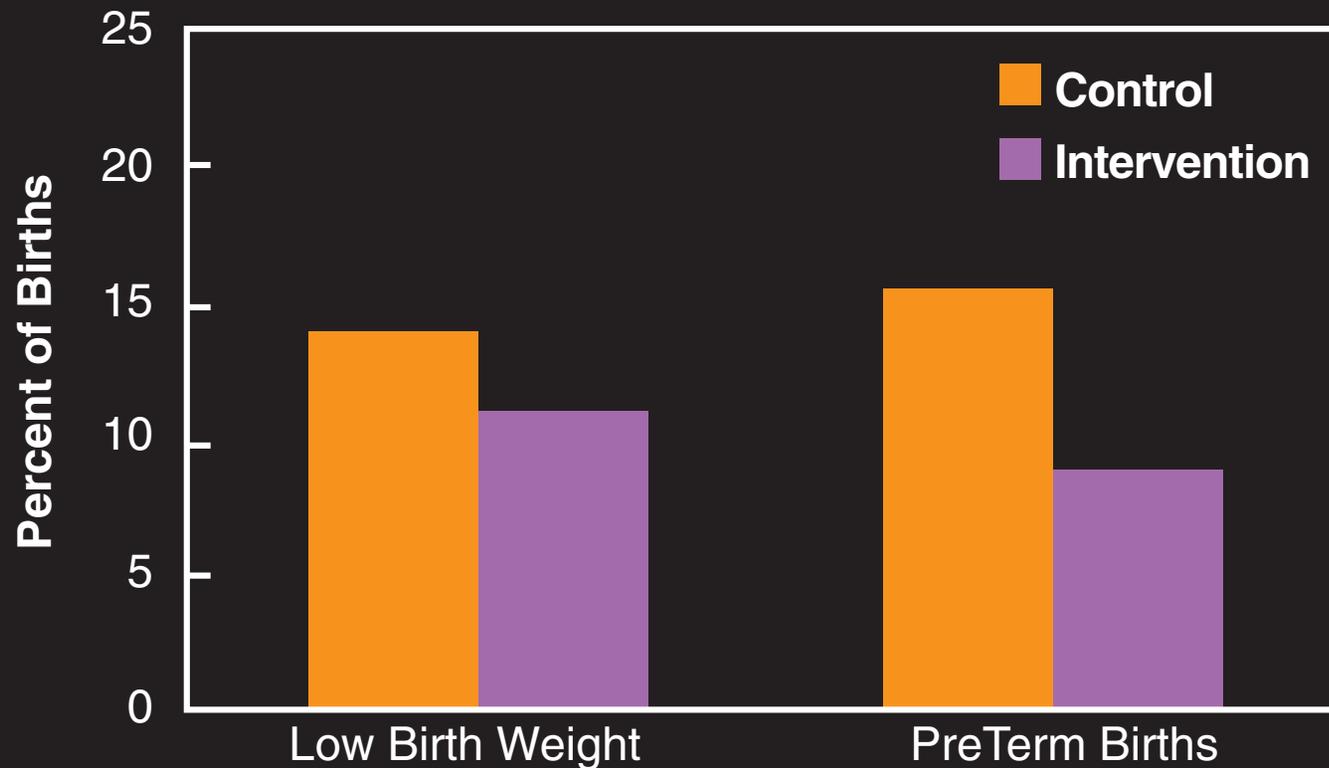
Dr. Grady has been recognized with several prestigious honors and awards for her leadership and scientific accomplishments, including being named the inaugural Rozella M. Schlotfeld distinguished lecturer at the Frances Payne Bolton School of Nursing at Case Western Reserve University and receiving the honorary degree of Doctor of Public

Service from the University of Maryland. Dr. Grady was named the 1995 Excellence in Nursing Lecturer by the Council on Cardiovascular Nurses of the American Heart Association.

Dr. Grady is a past recipient of the NIH Merit Award and received the Public Health Service Superior Service Award for her exceptional leadership as Acting Director of the NINDS.

NURSING RESEARCH MAKES A DIFFERENCE

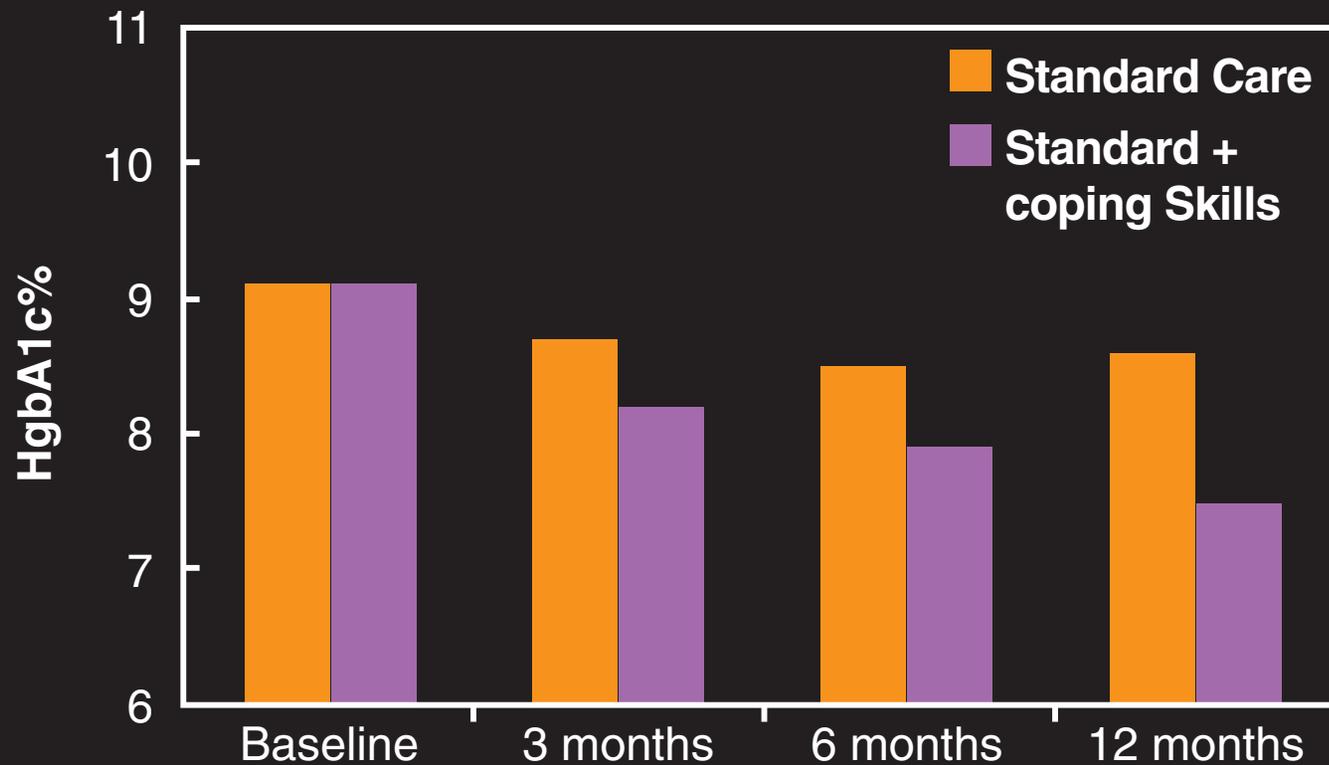
Birth Outcomes with Nurse Telephone Counseling



Hospital savings in high risk group
\$277/pregnancy

NURSING RESEARCH MAKES A DIFFERENCE

Coping Skills Training in Youth with Diabetes

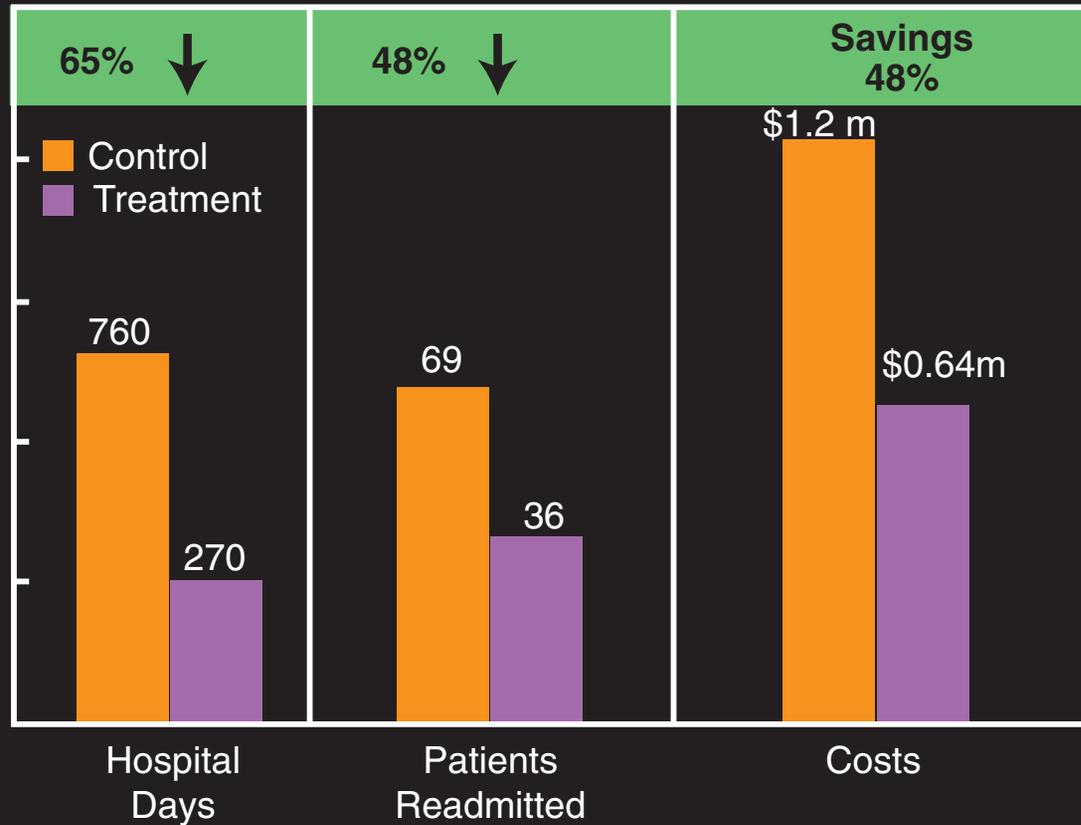


Could reduce risk of retinopathy
30-50%, if sustained

Grey M. Boland E, et al. Coping skills training for youth with diabetes mellitus has long-lasting effects on metabolic control and quality of life. *Journal of Pediatrics*, 2000;137: 107-113

NURSING RESEARCH MAKES A DIFFERENCE

Transitional Care Model for the Elderly



Naylor, MD, et al. Comprehensive discharge planning and home followup of hospitalized elders: a randomized clinical trial. *JAMA*, 1999;281:613-620